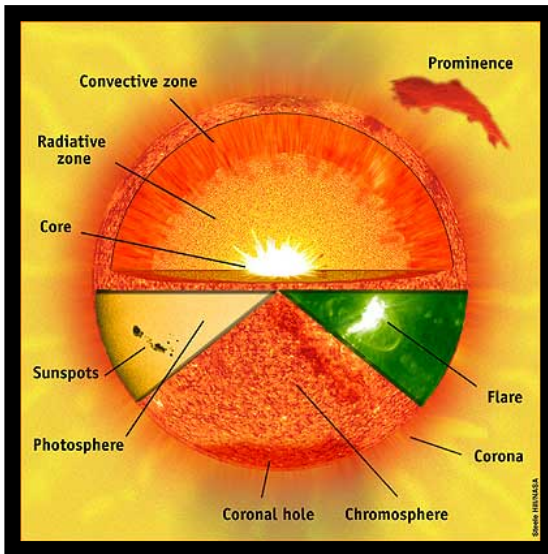


# The Sun

## Chapter 10

**T**he Sun is a star at the center of our Solar System. Everything in our Solar System orbits around the Sun including the planets, asteroids, meteoroids, and comets. The Sun contains 99.8% of the mass in our Solar System. The rest of the Solar System including planets, asteroids, and comets are only 0.2% of the Sun's mass.



The Sun  
SOHO

### **The Sun is crucial to life on Earth**

Mankind has always known the Sun is crucial to life on Earth. It heats the Earth and provides sunlight for plants to grow.

The energy from sunlight is harnessed by plants through the process of photosynthesis. Photosynthesis of sunlight by plants supports almost all life on Earth.

Recently discovered thermal vents on the bottom of the ocean contain the only life that is not dependent on sunlight. Coal, oil, and natural gas are examples of stored energy from sunlight.

# The Sun

## Quiz 10

### Fill in the blanks using words from the Word Bank

1. The \_\_\_\_\_ is a vast stream of particles traveling like beads on a string away from the Sun.
2. The Sun's \_\_\_\_\_ rotates faster than the north and south poles because the Sun has differential rotation.
3. Sunspots are regions of intense \_\_\_\_\_ activity on the surface of the Sun.
4. \_\_\_\_\_ are violent eruptions on the surface of the Sun that release as much energy as one billion atomic bombs.
5. Scientists think the lack of \_\_\_\_\_ might be responsible for the Little Ice Age that occurred between 1640 and 1700.
6. The surface of the Sun has three main parts: the chromosphere, the \_\_\_\_\_, and the corona.
7. The Sun contains 99.8% of the \_\_\_\_\_ in our Solar System.
8. The \_\_\_\_\_ can extend more than a million kilometers into space and merges with the solar wind and heliosphere.
9. The aurora borealis are only \_\_\_\_\_ in the Northern Hemisphere.
10. The Sun is a giant ball of \_\_\_\_\_ and hydrogen gases with a trace of other elements.

### Word Bank

mass	sunspots	solar wind	solar flares	visible
helium	equator	corona	photosphere	magnetic

# Solar Oven

## Activity 10

### Introduction

Solar ovens work convert sunlight into heat energy. Energy from the sun in these ovens cooks food and pasteurizes water for thousands of people worldwide. The most common type of solar oven is the box cooker made from wood, aluminum, and glass.

In this activity, you will be creating a small solar oven out of a pizza box that can get hot enough to cook food and kill germs in water. The picture below is a solar oven using one of our rock kit boxes with a marshmallow inside being cooked.



Solar oven

### Materials

- Recycled pizza box (other large flat boxes may be used)
- Aluminum foil
- Clear plastic wrap (plastic window covering from a hardware store works best but the plastic wrap will work)
- Black construction paper
- White school glue and tape
- Pencil or small wooden stick

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